



RHODE ISLAND FINANCING RESEARCH Recommendations and Next Steps

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DUNSKY EE/RE FINANCING EXPERIENCE



CLIENTS (partial list)



EXPERTISE

- ▶ Energy Efficiency and Demand-Side Management
- ▶ Renewable Energy and Emerging Technologies
- ▶ Greenhouse Gas Reductions

SERVICES

- ▶ Design and evaluation of programs, plans and policies
- ▶ Strategic, regulatory and analytical support
- ▶ New opportunities assessments

CLIENTELE

- ▶ Utilities
- ▶ Governments
- ▶ Solution Providers
- ▶ Large consumers
- ▶ Non-profits



1. INTRODUCTION

FINANCING STUDY APPROACH



Productive Meeting
Facilitated discussion
+ learning re. R.I.

Half-day session: Oct. 27
present findings; set
strategic priorities for R.I.

Half-day session: Nov. 21
thoughtful consideration
of preferred options for R.I.

Final session: Jan 29
present draft
recommendations;
collect feedback

K.O. SESSION

Tasks 1-4

WORKSHOP

Tasks 5,8

WORK-
SHOP

Tasks 6,7

FINDINGS

FINAL

Background Review:
Lay-of-the-Land

Strategic Assessment

Analysis of
financing
options

Recommendations
Report:
Annotated PPT
+ Memo

STUDY GOALS

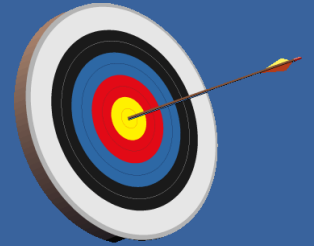


■ Financing goals:

- ▶ Maximize cost-effective savings
- ▶ Promote EE savings, by leveraging SBCs in the most effective manner
- ▶ Distribute benefits broadly and equitably
- ▶ Link with state's economic and environmental goals

■ Achieve EE savings of greater scales and deeper savings

- ▶ Engage hard-to-reach customers
- ▶ Shift the economy toward EE savings
- ▶ Investigate opportunities in a maturing EE market



What does EE financing success look like for RI?

- Impacts
- Perspectives
- Benchmarks
- Fit with least-cost procurement
- Links with incentives

2. CURRENT EE FINANCING IN RHODE ISLAND




RI FINANCING PROGRAMS OVERVIEW



- Programs supported by three sources of funds
 - ▶ System Benefits Charges (SBC) – Ratepayer money
 - ▶ Regional Greenhouse Gas Initiative (RGGI)
 - ▶ ARRA Funds (PACE, Commerce RI)
- Most sectors are served by a least one product: *Residential, Moderate Income, Small Business, Large Commercial and Institutional*
- Financing offered is almost all short term: *exceptions Commerce RI and PACE (to come)*
- 0% interest financing is the current norm: HEAT and OBF
- Limited use of 3rd party capital, heavy reliance on program funds
- Programs are delivered through valuable partnerships with simple administrative processes, and are well integrated with incentives

RESIDENTIAL PROGRAMS



RI HEAT + EnergyWise 	HERO PACE (CA) 	CEWO (OR) 
<ul style="list-style-type: none">• 0% financing (5% buy-down)• 7 year maximum tenor• \$25,000 maximum	<ul style="list-style-type: none">• 5.95%-8.25% interest• 20 year maximum tenor• \$5,000 - \$200,000 Loans• Extensive measures (non-energy)	<ul style="list-style-type: none">• 3.75% - 5.99% interest rate• 20 year maximum tenor• \$1,000- \$30,000 loans• Secured and unsecured options

- CEWO has twice the average project size and 2-4 times the annual savings per project compared to EnergyWise (2011)
- Survey of 15 Programs: **Mass and RI HEAT the only 0% interest rate offers**
 - ▶ Unsecured loans: shorter terms (5-10 years), smaller average loan (\$5,000 - \$8,000)
 - ▶ Secured loans: longer terms (10-20 years), larger average loan (\$12,000 - \$20,000)
- Deeper review and HEAT/EnergyWise evaluation would aid program design
 - ▶ Overall, little evidence is available that 0% interest drives program success

RESIDENTIAL BARRIERS



- HEAT loans may be putting pressure on participating financial institutions
- 0% HEAT loans tend toward the credit worthy – high AMI and FICO – do they really need more incentives?
- Marketing of the CGF for moderate income homeowners may not be adequate, not clear if HEAT referrals are taking place
- Audit requirements are restricting access to HEAT and CGF – especially for emergency measures – RISE monopoly
- PACE program has issued RFP and the team is working out some of the administrative challenges
 - ▶ There may be a marketing challenge to introduce a new PACE offering at market rates alongside the 0% financing available
 - ▶ Administration and contractor payment issues (especially for solar)

COMMERCIAL PROGRAMS



Small Business OBF



- 0% interest on bill financing
- **24 months tenor**
- Incentives up to 75% of project costs
- \$2,265 per loan average
- Rate-payer money
Revolving Fund

Small Business Energy Advantage



- 0% interest loans bought down from 6.3%
- **48 months tenor**
- Maximum loan \$100,000
- \$8,500 average loan
- **CT EE Fund provides LLR to support IOU capital**




Small Business Financing



- 2.5% interest on OBR financing or 50% of the principal at 0% interest with private FI
- **15 years tenor**
- Incentives up to 70% of project costs
- **NYSERDA Revolving Loan Fund (\$10M for C&I) + 50% from private lender**

COMMERCIAL PROGRAMS



Small Business OBF 	Small Business Energy Advantage 	Small Business Financing 
<ul style="list-style-type: none"> • 0% interest on bill financing • 24 months tenor • Incentives up to 75% of project costs • \$2,265 per loan average • Rate-payer money Revolving Fund 	<ul style="list-style-type: none"> • 0% interest loans bought down from 6.3% • 48 months tenor • Maximum loan \$100,000 • \$8,500 average loan • CT EE Fund provides LLR to support IOU capital 	<ul style="list-style-type: none"> • 2.5% interest on OBR financing or 50% of the principal at 0% interest with private FI • 15 years tenor • Incentives up to 70% of project costs • NYSERDA Revolving Loan Fund (\$10M for C&I) + 50% from private lender
RI LC&I Financing	CPUC OBF (CA)	Michigan Saves: Business Energy Fund
<ul style="list-style-type: none"> • 0% interest • 24 month tenor (now 60) • Incentives up to 70% • Utility bill payments history • SBC and RGGI 	<ul style="list-style-type: none"> • 0% Interest • 5 year tenor (10 year for public) • 20% maximum for lighting • Incentives up to 70% • Utility bill history (incl. renters) • Rate-payer funds 	<ul style="list-style-type: none"> • 5.9% minimum rate • 5 year tenor • Possible buy down to 1.99% interest • Must be cost-effective by audit with modeling • LLR and buy down from Michigan Saves

COMMERCIAL PROGRAM FINDINGS



	Average Loan Size	Maximum Incentive	Average Project Value	IOU cost per project
NGrid SB OBF	\$2,265	70%	\$7,550	\$5,533 (73%)
SBEA - CT Program	\$8,490	40%	\$14,151	\$6,965 (49%)

- 0% financing for SB and OBF is common especially in Small Business segment
- The 2-year maximum repayment terms may be limiting the impact of the OBF programs
- Overall size of capital pool insufficient to take on longer loan terms or large MUSH deferred maintenance projects integrated with EE
- Reporting on use and impact of OBF Revolving Funds is inconsistent and unclear

OBF PROGRAM REVOLVING FUND



2014 EE Plan

Table E- 10
National Grid
Revolving Loan Fund Projections

Large C&I Revolving Loan Fund

(1)	Total Loan Fund Deposits Through 2013	\$	8,979,678	(1)	Total I
	Estimated Outstanding Loan Balance				Estim:
(2)	Total Value of Disbursed Loans ¹	\$	3,026,711	(2)	
(3)	<u>2013 Repayments from loans²</u>	\$	<u>(1,477,874)</u>	(3)	
(4)	Total	\$	1,548,837	(4)	
	Projected Fund Status, Year End 2013				Projec
(5)	Estimated Outstanding Loan Balance Total	\$	1,548,837	(5)	
(6)	Committed Loans	\$	4,754,205	(6)	
(7)	<u>Uncommitted Funds³</u>	\$	<u>2,676,637</u>	(7)	
(8)	Total	\$	8,979,678	(8)	
	Loan Funds Available in 2014				Loan F
(9)	Uncommitted Funds	\$	2,676,637	(9)	
(10)	2014 Repayments from from loans ⁴	\$	3,181,830	(10)	
(11)	<u>2014 Finance Budget⁵</u>	\$	<u>1,000,000</u>	(11)	
(12)	Total Available for Loans in 2014	\$	6,858,467	(12)	
(13)	Projected Total Loan Fund Deposits Through 2014	\$	9,979,678		

Notes

		LCI Funds	SB Funds
End of 2013	Fund balance (\$,000)	8,980	4,159
	Unallocated (\$,000)	2,676	1,586
	Unallocated (%)	30%	38%
End of 2014	Fund balance (\$,000)	13,980	4,159
	Unallocated (\$,000)	7,794	2,452
	Unallocated (%)	55%	58%
2010-2014	Average Annual Loan Volume	2,619 (4,121 in 2014)	1,207 (1,330 in 2014)

2015 EE Plan

Table E- 10
National Grid
Revolving Loan Fund Projections

Large C&I Revolving Loan Fund

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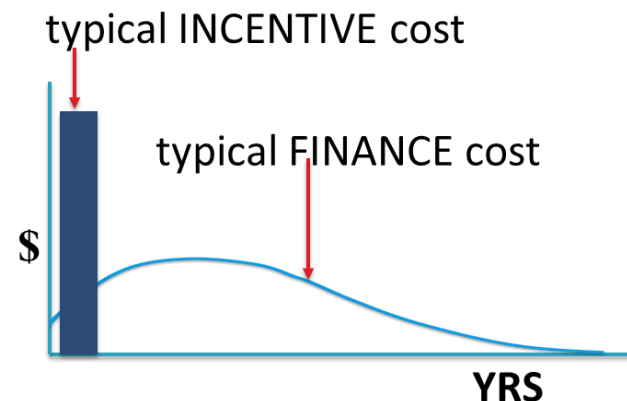
(1)	Total Loan Fund Deposits Through 2014	\$	9,979,678	(1)	Total L
(2)	Current Loan Fund Balance	\$	6,589,633	(2)	Current
(3)	Projected Loans by Year End	\$	2,857,696	(3)	Project
(4)	<u>Projected Repayments by Year End</u>	\$	<u>1,325,791</u>	(4)	<u>Project</u>
(5)	Projected Year End Loan Fund Balance	\$	5,057,728	(5)	Project
(6)	Fund Injection	\$	4,000,000	(6)	Fund Ir
(7)	Projected Loan Fund Balance, January 2015	\$	9,057,728	(7)	Project
(8)	Projected Repayments throughout 2015	\$	2,091,744	(8)	Project

COST EFFECTIVENESS AND EVALUATION OF FINANCING



- Evaluation of financing is a complex issue, and a number of fundamentally different approaches can be taken

- ▶ Cost-effectiveness not yet well developed: e.g. Attribution models being developed
- ▶ Time and Scope differs from incentives
- ▶ Non-energy measures often included (financing may not stand up under strict TRC)



- Can financing replace (a portion of) incentives?

- ▶ Limited evidence available: Comparing RI, CA and CT may provide clues in coming years
- ▶ Ultimately goal is to find the right combination to expand uptake of EE

- The Lowest Cost Procurement requires investment in Cost-Effective EE...

... however for financing there is no CE testing or assessment of metrics

- ▶ Need to start gathering the information through evaluation process
- ▶ Assess when tools are available: eg. PAC and TRC for Financing

COMMERCIAL PACE



- Commercial PACE programs available in 13 states:
 - ▶ \$100M estimated market
 - ▶ 300 (approx.) projects to date
- Beyond establishing PACE legislation, infrastructure is needed to make PACE successful
 - ▶ Central source of funds; 3rd party private or government pool
 - ▶ Central administrator (i.e. PACE Maine) to develop technical underwriting standards and engage in major marketing efforts
 - ▶ Large City to tailor its own PACE

C-PACE Connecticut

- Broad list of eligible measures
- No maximum loan size, projects listed as high as \$2M in value
- **Variable interest rate 5%-6%**
- **20 year maximum tenor**
- 85% of C&I market in municipalities with C-PACE
- **Projects typically achieve 35%-45% energy savings**
- Positive cash flow Y1 , LTV ratio, business profitability, debt service ratio, liabilities
- 3rd party technical review of project required
- **Incentives cover 25%-30%**
- **\$10M RGGI, 3rd party lenders, CEFIA warehousing**

3. RECOMENDATIONS

RESIDENTIAL RECOMMENDATIONS

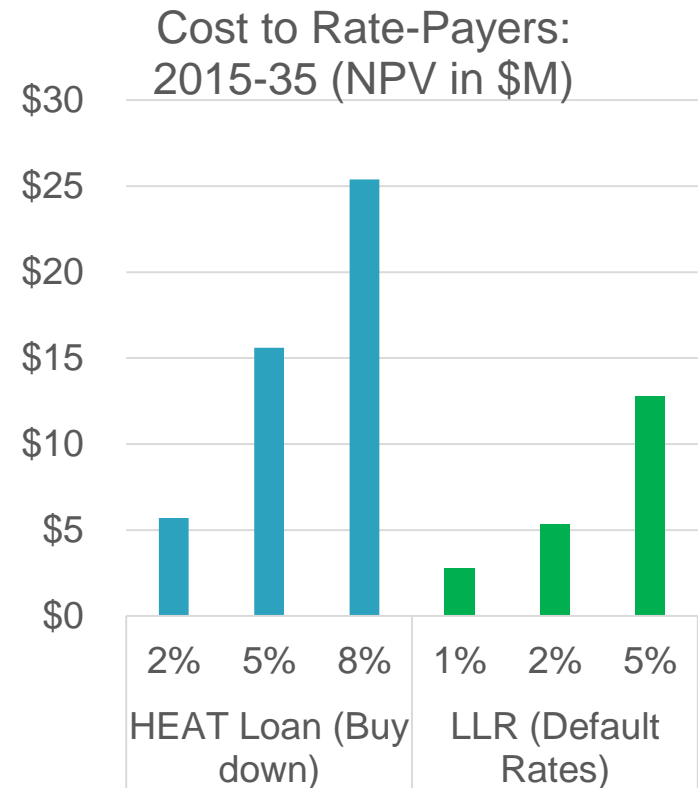


■ Re-evaluate the 0% HEAT Loan model

- ▶ 5% buy-down is expensive, LLR may offer cheaper alternative
- ▶ Little evidence 0% rate increases uptake
- ▶ 0% HEAT may hinder PACE marketing
- ▶ Direct 0% just to those with affordability barrier (The Capital Good Fund)

■ Develop a clear strategy for PACE and HEAT to work together

- ▶ HEAT loans for shorter term financing, unsecured, based on credit worthiness
- ▶ PACE loans for customers with equity in their property, deeper measures, longer term
- ▶ Processes to ensure that no viable participant falls through the cracks





■ Improve reporting and evaluation of OBF program

IMMEDIATE

- ▶ Clear and consistent year over year reporting of OBF balance sheet

PROCESS EVALUATION

- ▶ NGrid underwriting process effectiveness and links with delinquency rates
- ▶ Loan administration process and potential barriers/opportunities for OBR

IMPACT EVALUATION

- ▶ Deeper dig on the Free-ridership rates for C&I (SB, LCI)
- ▶ Evaluate impact and cost-effectiveness of the 0% financing coupled with the 70% incentives across program



■ Develop long term (10-20 year) commercial financing options

- ▶ Will need to attract 3rd party capital to supply needs
- ▶ National Grid does not have the desire or capacity to underwrite long term financing

OPTION 1: COMMERCIAL PACE

- ▶ Consider expanding PACE legislation to include commercial properties

OPTION 2: COMMERCIAL OBR

- ▶ Links well with existing OBF approach, requires negotiated repayment mechanisms

OPTION 3: COMMERCIAL LLR

- ▶ Standalone LLR combined with NGrid technical underwriting to support private lending or OBR (or commercial PACE, if needed)



- **Establish pool of funds for MUSH sector using low cost bonds issued by Clean Water Finance Agency (CWFA)**
 - ▶ Consider special initiative funding, such as a pool to empower municipalities to buy and upgrade street lights (\$50M need)

- **Establish long term MUSH financing mechanisms**
 - ▶ Couple National Grid's technical underwriting with a 3rd party lender's (i.e. CWFA) financial underwriting to establish a long term program for MUSH (i.e. 20 yr boiler replacement)
 - ▶ Consider off-balance sheet approaches: OBR, ESA/MESA

NEXT STEPS...



■ Strategic evaluation to support new programs

- ▶ Evaluation of the HEAT Loan to support seamless integration of residential products (HEAT, PACE, The Capital Good Fund)
- ▶ C&I market assessment and OBF process evaluation to determine OBR, PACE and LLR potential

■ Develop **ongoing evaluation and reporting framework** for all financing programs to track effectiveness and impact

- ▶ Ensure regular and timely evaluation of financing programs
- ▶ Integrate into evaluation cycle for incentive programs
 - *e.g. Integrate HEAT loan evaluation into the EnergyWise/HVAC program evaluations*

■ Engage with specialized **private lenders for long term commercial and municipal** programs

- ▶ Bring in expertise to assist OER and/or RI treasurer to explore and negotiate options with private lenders for OBR, PACE etc.
- ▶ Explore solutions with specialized financing companies to find the delivery vehicle and what they can offer (such as RENEW, LIIF)

QUESTIONS ?

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